Manufacturers Reference No. for Application

SING. GAZ.111

F.I.A. Recognition No. 1240

ROYAL AUTOMOBILE CLUB

PALL MALL, LONDON, S.W.I.

Federation Internationale de l'Automobile.

Form of Recognition in accordance with Appendix J to the International Sporting Code.

Manufacturer SINGER MOTORS LIMITED

Model SINGER GAZELLE (SERIES 5) Year of Manufacture 1963

Serial No. of Chassis B 7300001

Engine B 7300001

Type of Coachwork FOUR DOOR FOUR LIGHT FOUR SEATER SALOON

Recognition is valid from SEPTEMBER 1963 In category TOURING

November 4th, 1963, List 9/24

Le moteur ne doit pas exceder 1600 cm 3 de cylindrée

Engine must not exceed 1600 cc

Photograph to be affixed here ¾ view of car from front right.

Stamp of F.I.A./R.A.C. to be affixed here.

Form: R.F.I.A.

General description of car:

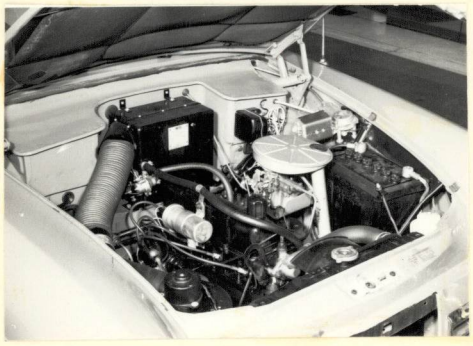
Specify here material/s of chassis/body construction

Photographs to be affixed below.

¾ view of car from rear left.

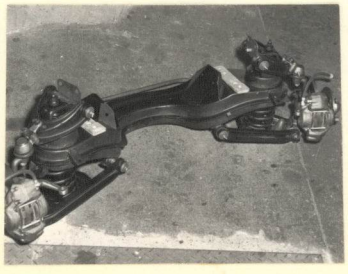
Interior view of car through driver's door.

Engine unit with accessories from right.

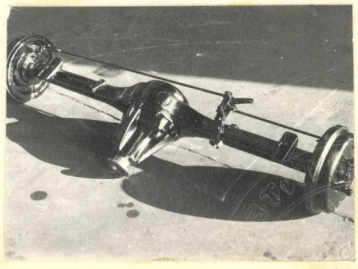


Engine unit with accessories from left.

Front axle complete (without wheels).



Rear axle complete (without wheels).



ENGINE

in line Yes

No. of cylinders 4 in V

opposed

Cycle 4 Stroke Firing order 1342

Capacity 1592 c.c. Bore 81.534 m.m. Stroke 76.2 m.m.

Maximum rebore 83.034 Resultant capacity 1652 c.c.

Material of cylinder block Cast Iron Material of sleeves, if fitted None

Distance from crankshaft centre line to top face of block at centre line of cylinders 231.8 m.m.

Material of cylinder head Cast Iron Volume of one combustion chamber 44 c.c.

Compression ratio 8.3

Material of piston Aluminium No. of piston rings 3

Distance from gudgeon pin centre line to highest point of piston crown 47 m.m.

Bearings
- Crankshaft main bearings: Type White Metal Dia. 57.13 m.m.
- Connecting rod big end: Type Aluminium-Tin Dia. 50.82 m.m.

Weights
- Flywheel 8.64 kg.
- Crankshaft 16.1 kg.
- Connecting rod .69 kg.
- Piston with rings .42 kg.
- Gudgeon pin .13 kg.

No. of valves per cylinder 2 Method of valve operation Pushrod

No. of camshafts 1 Location of camshafts In Block

Type of camshaft drive Duplex Chain

Diameter of valves:	Inlet	36.45 m.m.	Exhaust	29.77 m.m.
Diameter of port at valve seat:	Inlet	33.3 m.m.	Exhaust	26.9 m.m.
Tappet clearance for checking timing:	Inlet	.498 m.m.	Exhaust	.498 m.m.
Valves open:	Inlet	14 BTDC	Exhaust	56 BBDC
Valves close:	Inlet	52 ABDC	Exhaust	10 ATDC
Maximum valve lift:	Inlet	8.62 m.m.	Exhaust	8.62 m.m.
Degrees of crankshaft rotation from zero to—				
Maximum lift:	Inlet	123	Exhaust	123
¾ Maximum lift:	Inlet	71	Exhaust	71

Valve springs:

	Inlet	*Exhaust*
Type	Coil	Coil
No. per valve	2	2

Carburettor: Type Downdraft No. fitted 1

(up or down draft, horizontal)

Make Zenith Model 32 VN

Flange hole diameter 32 m.m. Choke diameter 27 m.m.

Main jet identification No. 65

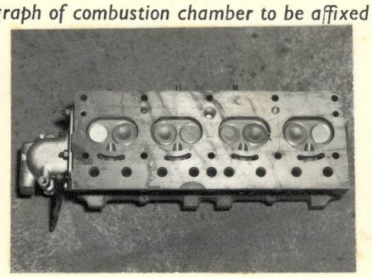
Air filter: Type Paper Element No. fitted 1

Inlet manifold:

Diameter of flange hole at carburettor 33.0 m.m.

Diameter of flange hole at port 32.0 m.m.

Photograph of combustion chamber to be affixed here.



Photograph of inlet manifold to be affixed here.

Exhaust manifold:

Diameter of flange hole at port 27 m.m.

Diameter of flange hole at connection to silencer inlet pipe 45.7 m.m.

Photograph of piston showing crown to be affixed here.

Photograph of exhaust manifold to be affixed here.

ENGINE ACCESSORIES

Make of fuel pump A.C. No. fitted 1

Method of operation Mechanical

Type of ignition system Coil coil or magneto

Make of ignition Lucas Model 25 D4

Method of advance and retard Centrifugal and Vacuum

Make of ignition coil Lucas Model HA 12

No. of ignition coils 1 Voltage 12

Make of dynamo Lucas Model C 40

Voltage of dynamo 12 Maximum output 22 amps.

Make of starter motor Lucas Model M 35 G

Battery: No. fitted 1 Voltage 12 Capacity 38 amp. hour

Oil Cooler (if fitted) type Radiator Capacity 2 pints

Make SINGER Model GAZELLE V F.I.A. Recognition No.

Manufacturers Reference No. of Application SING.GAZ.LLL

TRANSMISSION

Make of clutch BORG & BECK Type SINGLE DRY PLATE

Diameter of clutch plate 8" No. of plates 1

Method of operating clutch Hydraulic Foot Operated.

Make of gearbox Rootes Type Constant Mesh

No. of gearbox ratios 4 forward and reverse

Method of operating gearshift Manual Remote Control

Location of gearshift Centre Floor Lever

Is overdrive fitted? No.

Method of controlling overdrive, if fitted

	GEARBOX RATIOS		ALTERNATIVE RATIOS					
	Ratio	No. of Teeth	Ratio	No. of Teeth	Ratio	No. of Teeth	Ratio	No. of Teeth
1.	3.346	29 x 30 / 20 13						
2.	2.141	29 x 31 / 20 21						
3.	1.392	29 x 24 / 20 25						
4.	1.000	Direct						
Rev.	4.239	29 x 30 / 20 13	x 19 / 15					

Type of final drive Hypoid

Type of differential Normal 2 Pinions and Side Gears

Final drive ratio 3.89:1 Alternatives 3.70 4.22 4.44 4.86

No. of teeth 35/9 37/10 38/9 40/9 34/7

Overdrive ratio, if fitted

WHEELS

Type Disc Pressed Steel Weight 5.76 kg.

Method of attachment 4 - 7/16 UNF Studs

Rim diameter 330.2 m.m. Rim width 116.2 m.m.

Tyre size: Front 6 x 13 Rear 6 x 13

BRAKES

Method of operation Hydraulic

Is servo assistance fitted? No

Type of servo, if fitted

No. of hydraulic master cylinders 1 Bore 25.4 m.m.

	Front	Rear
No. of wheel cylinders	Two per wheel	One per wheel
Bore of wheel cylinders	54 m.m.	19.1 m.m.
Inside diameter of brake drums	m.m.	228.6 m.m.
No. of shoes per brake		2
Outside diameter of brake discs	247.5 m.m.	m.m.
No. of pads per brake	2	

Dimensions of brake linings per shoe or pad (if all shoes or pads in each brake are not of same dimensions, specify each)

	Front	Rear
Length	Available Volume m.m.	219 m.m.
	29.6 CM^3 m.m.	2.19 m.m.
Width	m.m.	44.5 m.m.
Total area per brake	6260 m.m.^{2}	19,500 m.m.^{2}

SUSPENSION

	Front	Rear
Type	Independant Wishbone	Live Axle
Type of spring	Coil	Semi Elliptic Leaf
Is stabiliser fitted?	Yes	No
Type of shock absorber	Hydraulic Telescopic	Hydraulic Telescopic
No. of shock absorbers	2	2

STEERING

Type of steering gear: Burman Recirculating Ball

Turning circle of car: 10.25 m., approx.

No. of turns of steering wheel from lock to lock: 3¼

CAPACITIES AND DIMENSIONS

Fuel tank: 33.0 litres Sump: 4.5 Inc Oil Filter litres

Radiator: 7.0 litres

Overall length of car: 411 cm. Overall width of car: 154 cm.

Overall height of car, unladen (with hood up, if appropriate): 148 cm.

Distance from floor to top of windscreen:

Highest point: 108 cm. Lowest point: 103 cm.

Width of windscreen:

Maximum width: 116 cm. Minimum width: 108 cm.

*Interior width of car: 133 cm.

No. of seats: 4

Track: Front: 131 cm. Rear: 123 cm.

Wheelbase: 244 cm. Ground clearance: 178 m.m.

*(To be measured at the immediate rear of the steering wheel, and the width quoted to be maintained in a vertical plane of not less than 25 cms.)

Overall weight with water, oil and spare wheel, but without fuel: 965 kgs.

Additional information for cars fitted with two-cycle engines

System of cylinder scavenging.....

Type of lubrication.....

Size of inlet port:

Length measured around cylinder wall.....m.m.

Height.....m.m. Area.....m.m.^{2}

Size of exhaust port:

Length measured around cylinder wall.....m.m.

Height.....m.m. Area.....m.m.^{2}

Size of transfer port:

Length measured around cylinder wall.....m.m.

Height.....m.m. Area.....m.m.^{2}

Size of piston port:

Length measured around piston.....m.m.

Height.....m.m. Area.....m.m.^{2}

Method of pre-compression.....

Bore and stroke of pre-compression cylinder, if fitted.....m.m.

Distance from top of cylinder block to lowest point of inlet port.....m.m.

Distance from top of cylinder block to highest point of exhaust port.....m.m.

Distance from top of cylinder block to highest point of transfer port.....m.m.

Drawing of cylinder ports.

Supercharger, if fitted

Make..... Model or Type No.....

Type of drive..... Ratio of drive.....

Fuel injection, if fitted

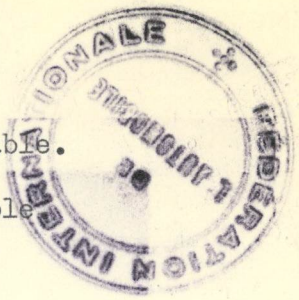
Make of pump..... Model or Type No.....

Make of injectors ..... Model or Type No.....

Location of injectors.....

Optional equipment affecting preceeding information:—

1. Petrol Tank Shield Available
2. Export Suspension with Aeon Rubbers Available.
3. Long Range Fuel Tank of 100 Litres Available
4. Lightweight Competition Seats Available.



Manufacturers Reference No. for Application

SING GAZ III.

F.I.A. Recognition No. 1240. /1/ET

ROYAL AUTOMOBILE CLUB

PALL MALL, LONDON, S.W.I.

Federation Internationale de l'Automobile.

Amendment to Form of Recognition

Manufacturer Singer Motors Limited.

Model Singer Gazelle. (Series 5).

All synchromesh gearbox now fitted to this model as standard equipment.

Part No. 5220878.

FÉDÉRATION INTERNATIONALE DE L'AUTOMOBILE

Stamp of F.I.A./R.A.C. to be affixed here.

Date amendment is valid from 1st February 1965

Form: R.F.I.B.